IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A separator for an electrochemical cell, comprising:

(A) a flexible ~~perforate~~ perforated support,

(B) a ~~porous~~ first porous ceramic material coated as a first layer directly on the flexible perforated support and which fills the perforations in the flexible perforated support, and which

(i) has a pore structure having an average pore size, and

(ii) ~~is suitable for receiving~~ may comprise an ion-conducting electrolyte,

wherein

(C) an electrolyte-contactable pore surface of the first layer of the first porous ceramic material is covered ~~with~~ a second layer comprising fine particles of a further material ~~to extend the use life~~, wherein the average size of the fine particles ~~being~~ are in the range from 0.5 to 30% of the average pore size of the first porous ceramic material.

Claim 2 (Currently Amended): The separator of claim 1, wherein the further material of the fine particles is identical to or different from the first porous ceramic material.

Claim 3 (Currently Amended): The separator of claim 2, wherein the further material of the fine particles is different from the first porous ceramic material.

Claim 4 (Currently Amended): The separator of claim 2, wherein the further material of the fine particles ~~comprise~~ comprises one or more selected from the group consisting of SiO_2, Al_2O_3, ZrO_2 [[or]] and SiC.

Claim 5 (Previously Presented): The separator of claim 2, wherein the fine particles comprise Li_2CO_3, Li_3N, $LiAlO_2$ or $Li_xAl_yTi_z(PO_4)_3$, and wherein $1 \leq x \leq 2$, $0 \leq y \leq 1$ and $1 \leq z \leq 2$.

Claim 6 (Currently Amended): The separator of claim 1, comprising [[an]] the ion conducting electrolyte ~~for ion conductance~~.

Claim 7 (Currently Amended): The separator of claim 1, wherein the fine particles are incorporated in the first porous ~~first~~ ceramic material and are exposed on the pore surface.

Claim 8 (Currently Amended): The separator of claim 1, wherein the ~~porous~~ first porous ceramic material is coated with the fine particles.

Claim 9 (Currently Amended): The separator of claim 1, wherein the first porous ceramic material has an average pore size in the range from 50 nm to 5 μm.

Claim 10 (Currently Amended): The separator of claim 1, wherein the first porous ceramic material comprising fine particles has a porosity in the range from 10% to 70%.

Claim 11 (Currently Amended): The separator of claim 1, wherein the first porous ceramic material comprises one or more oxides selected from the group consisting of ~~an oxide of~~ zirconium oxide, silicon oxide and [[or]] aluminum oxide.

Claim 12 (Currently Amended): The separator of claim 1, wherein the first porous ceramic material is produced by solidifying a slip which contains first particles having a large average particle size which determine [[the]] a pore structure of the first porous ceramic material and ~~also~~ second particles having a smaller average primary particle size than the average particle size of the first particles and which adhere the ~~large~~ first particles together ~~in the course of the solidification~~ during the solidifying of the slip.

Claim 13 (Currently Amended): The separator of claim 1, wherein the ~~perforate~~ flexible perforated support comprises polymeric fibers, glass or ceramic.

Claim 14 (Currently Amended): The separator of claim 1, wherein the ~~perforate~~ flexible perforated support comprises fibers.

Claim 15 (Currently Amended): The separator of claim 1, wherein the flexible perforated support comprises fibers and/or filaments from 1 to 150 μm and/or yarn from 3 to 150 μm in diameter.

Claim 16 (Currently Amended): The separator of claim 1, wherein the flexible perforated support is a nonwoven having a pore size from 5 to 500 μm.

Claim 17 (Previously Presented): The separator of claim 1, wherein the separator is stable under service conditions at not less than 100°C.

Claim 18 (Previously Presented): The separator of claim 1, wherein the separator ranges from 10 to 1 000 μm in thickness.

Claim 19 (Previously Presented): The separator of claim 1, wherein the separator tolerates a bending radius down to 100 mm.

Claim 20 (Withdrawn): A process for producing a separator for an electrochemical cell as claimed in claim 1, comprising:

(a) applying a dispersion as a thin layer onto and into a woven and/or nonwoven, the dispersion comprising:

(a1) large ceramic particles whose average particle size provides a pore structure to the thin layer having an average pore diameter,

(a2) fine particles whose average particle size is in the range from 0.5 to 30%, of the average particle size of the ceramic material, and

(a3) optionally, ceramic particles having an average primary particle size which is substantially less than the average particle size of the ceramic particles as per (a1) and (a2); and

(b) solidifying the dispersion at a temperature from 100°C to 680°C to form a separator.

Claim 21 (Withdrawn): The process of claim 20, wherein the dispersion in step (a) further comprises a sol.

Claim 22 (Withdrawn): A process for producing a separator for an electrochemical cell as claimed in claim 1, comprising:

(i) providing a composite formed from a perforated support, and also a porous ceramic material whose pore structure having an average pore size;

(ii) treating the composite with a dispersion of fine particles having an average particle size in the range from 0.5 to 30% of the average pore size in a dispersion medium so that the electrolyte-accessible pore surface of the composite is coated with the dispersion and the dispersion comprises from 1 to 25% by weight; and

(iii) drying the dispersion at a temperature in the range from 100°C to 680°C so that the coated pore surface is coated with the fine particles.

Claim 23 (Withdrawn): The process of claim 22, wherein the composite is a separator which is obtained by the process of claim 20.

Claim 24 (Withdrawn): The process of claim 20, wherein the dispersion comprises one or more additional components selected from the group consisting of adhesion promoters, dispersing assistants, agents for setting the viscosity, agents for setting the flow properties and other customary assistants for producing dispersions.

Claim 25 (Withdrawn): The process of claim 20, wherein the dispersion medium contains water and the fine particles are hydrolysis-stable element oxide particles.

Claim 26 (Withdrawn): The process of claim 20, wherein the dispersion medium is an anhydrous organic solvent and the fine particles comprise hydrolysis-sensitive materials.

Claim 27 (Withdrawn): The process of claim 20, wherein the ceramic particles comprise a material selected from the group consisting of aluminum oxide, silicon oxide, zirconium oxide and mixtures thereof.

Claim 28 (Withdrawn): An electrochemical cell, a lithium battery, lithium ion battery or a lithium polymer battery, wherein the cell comprises a separator as claimed in claim 1.

Claim 29 (Canceled).

Claim 30 (Withdrawn): A method of separation for an electrochemical cell, wherein the separator, according to claim 1, is introduced into the cell.

Claim 31 (Withdrawn): The method of separation according to claim 30, wherein the electrochemical cell is a high power battery.

Claim 32 (New): The separator of claim 1, wherein the first layer of the first porous ceramic material further comprises an adhesion promoter.

Claim 33 (New): The separator of claim 1, wherein the first layer of the first porous ceramic material further comprises at least one adhesion promoter comprising at least organofunctional group selected from the group consisting of a glycidyl group, a methacryloyl group, an amino group, and a vinyl group.

Claim 34 (New): The separator of claim 1, wherein the first layer of the first porous ceramic material contains an adhesion promoter having at least one of a glycidyl group and a methacryloyl group.

Claim 35 (New): The separator of claim 1, wherein the first layer of the first porous ceramic material comprises at least one adhesion promoter selected from the group consisting of 3-aminopropyltriethoxysilane, 2-aminoethyl-3-aminopropyltrimethoxysilane, 3-glycidyloxytrimethoxysilane, and 3-methacryloyloxypropyltrimethoxysilane.